

Please type a plus (+) sign in this box → ☐

PTO/SB/05 (4/98)  
Approved for use through 09/30/2000. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new non-provisional applications under 37 C.F.R. § 1.53(B))

Attorney Docket No. C86.12-0003

First Inventor or Application Identifier Yung-Liang Chang

Title ADDRESSABLE TAP WITH CHANNEL TIER  
FUNCTIONS

Express Mail Label No. EV178023302US

**APPLICATION ELEMENTS**  
See MPEP chapter 600 concerning utility patent application contents.

Address To: Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

1. ☒ \*Fee Transmittal Form e.g., PTO/SB17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant Claims small entity status
3. ☒ Specification [Total Sheets **5**]  
(preferred arrangement set forth below)  
- Descriptive title of the Invention)  
- Cross References to Related Applications  
- Statement Regarding Fed sponsored R & D  
- Reference to Microfiche Appendix  
- Background of the Invention  
- Brief Summary of the Invention  
- Brief Description of the Drawings (if filed)  
- Detailed Description  
- Claim(s)  
- Abstract of the Disclosure

7. ☐ CD-ROM or CD-R in duplicate, large table or  
Computer program (Appendix)

8. Nucleotide and/or Amino Acid Sequence Submission  
(If applicable, all necessary)

- a. ☐ Computer Readable Copy  
b. Specification Sequence Listing on:  
i. ☐ CD-ROM or CD-R (2 Copies); or  
ii. ☐ Paper  
c. ☐ Statement verifying identity of above copies

4. ☒ Drawing(s) (35 U.S.C. § 113) [Total Sheets **2**]

5. Oath or Declaration [Total Sheets **2**]

- a. ☒ Newly executed (original or copy)  
b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 18 completed)  
i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting  
inventor(s) named in the prior application,  
see 37 C.F.R. §§1.63(d)(2) and 1.33(b).

6. ☒ Application Data Sheet. See 37 CFR 1.76

**ACCOMPANYING APPLICATION PARTS**

9. ☐ Assignment Papers (cover sheet & document(s))  
10. ☐ 37 C.F.R. § 3.73(b) Statement ☒ Power of  
(when there is an assignee) Attorney  
11. ☐ English Translation Document (if applicable)  
12. ☐ Information Disclosure ☐ Copies of IDS  
Statement (IDS)/PTO – 1449 Citations  
13. ☒ Preliminary Amendment  
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)  
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)  
16. ☐ Nonpublication Request Under 35 USC 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35  
or its equivalent  
17. ☐ Other:

18. If a **CONTINUING APPLICATION**, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an  
Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation –in part (CIP)

of prior application No: \_\_\_\_\_ /

Prior application information: Examiner \_\_\_\_\_

Group/Art Unit: \_\_\_\_\_

**FOR CONTINUATION or DIVISIONAL APPS only:** The entire disclosure of the prior application, from which an oath or declaration is supplied  
under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by  
reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.


**17. CORRESPONDENCE**

☐ Customer Number or Bar Code Label

(Insert Customer No. or Attach bar code label here)

or ☒ Correspondence address below


|         |                                   |           |                |          |                |
|---------|-----------------------------------|-----------|----------------|----------|----------------|
| Name    | Judson K. Champlin                |           |                |          |                |
|         | WESTMAN CHAMPLIN & KELLY          |           |                |          |                |
| Address | Suite 1600 – International Centre |           |                |          |                |
|         | 900 Second Avenue South           |           |                |          |                |
| City    | Minneapolis                       | State     | MN             | Zip Code | 55402-3319     |
| Country | USA                               | Telephone | (612) 334-3222 | Fax      | (612) 334-3312 |

|                   |   |                                   |         |
|-------------------|---|-----------------------------------|---------|
| Name (Print/type) | Judson K. Champlin  | Registration No. (Attorney/Agent) | 34,797  |
| Signature         |  | Date                              | 4/19/04 |

17513 U.S. PTO  
10/827560

041904

| <b>FEE TRANSMITTAL</b>   | <i>Complete if Known</i> |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
|--|--------------------------|--|---|----------------|------------|----------------|--------------|-----------------|-------------|-----------------|--------------|-------------|--|---------------|--------------|--|-------------|--------------|---|--|------------|---|----------------------------|---------------------------|---|---------------|---------------|--|--|---------------|--------------|--|--|---------------|---------------|---|--|---------------|---------------|--|--|---------------|---------------|---|--|---------------|---------------|--|--|---------------|---------------|--|--|---------------|---------------|--------------------------|--|---------------|--------------|-------------------------|--|---------------|--------------|----------------------------------|--|---------------|---------------|------------------------------------|--|---------------|---------------|---|--|---------------|---------------|--|--|---------------|---------------|-------------------------------|--|--------------|--------------|---|--|---------------|---------------|--|--|--------------|--------------|--|--|---------------------------|--|--|--|
|  | Application No.          |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
|  | Filing Date              |  | Herewith                                    |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
|  | First Named Inventor     |  | Yung-Liang Chang                            |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
|  | Title                    |  | ADDRESSABLE TAP WITH CHANNEL TIER FUNCTIONS |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
|  | Group Art Unit           |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Examiner Name  |                          |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Total Amount of Payment    \$ 385  |                          | Atty. Docket Number  |   | C86.12-0003    |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <b>METHOD OF PAYMENT (Check One)</b>   |                          | <b>FEE CALCULATION (Continued)</b>   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any additional fee required under 37 C.F.R. § 1.16 and 1.17, including any petition fee, and credit any over payments to Deposit Account No. <u>23-1123</u> . Westman, Champlin & Kelly, P.A.<br><br>2. <input checked="" type="checkbox"/> Charge Authorization Form PTO 2038  |                          | <b>3. ADDITIONAL FEES</b><br><br><table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Large Entity</th> <th style="text-align: left;">Small Entity</th> <th style="text-align: left;">Fee Description</th> <th style="text-align: right;">Fee Paid</th> </tr> <tr> <th>Code    (\$)</th> <th>Code    (\$)</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1051      130</td> <td>2051      65</td> <td>Surcharge - Late filing fee or oath</td> <td></td> </tr> <tr> <td>1052      50</td> <td>2052      25</td> <td>Surcharge - Late provisional Filing Fee or cover sheet</td> <td></td> </tr> <tr> <td>1053      130</td> <td>1053      130</td> <td>Non-English specification</td> <td></td> </tr> <tr> <td>1812    2,520</td> <td>1812    2,520</td> <td>For Filing a Request for Reexamination. (ex parte)</td> <td></td> </tr> <tr> <td>1251      110</td> <td>2251      55</td> <td>Extension for reply within first month</td> <td></td> </tr> <tr> <td>1252      420</td> <td>2252      210</td> <td>Extension for reply within second month</td> <td></td> </tr> <tr> <td>1253      950</td> <td>2253      475</td> <td>Extension for reply within third month</td> <td></td> </tr> <tr> <td>1254    1,480</td> <td>2254      740</td> <td>Extension for reply within fourth month</td> <td></td> </tr> <tr> <td>1255    2,010</td> <td>2255    1,005</td> <td>Extension for reply within fifth month</td> <td></td> </tr> <tr> <td>1402      330</td> <td>2402      165</td> <td>Filing a brief in support of an appeal</td> <td></td> </tr> <tr> <td>1403      290</td> <td>2403      145</td> <td>Request for oral hearing</td> <td></td> </tr> <tr> <td>1814      110</td> <td>2814      55</td> <td>Terminal Disclaimer Fee</td> <td></td> </tr> <tr> <td>1452      110</td> <td>2452      55</td> <td>Petition to Revive - unavoidable</td> <td></td> </tr> <tr> <td>1453    1,330</td> <td>2453      665</td> <td>Petition to Revive - unintentional</td> <td></td> </tr> <tr> <td>1501    1,330</td> <td>2501      665</td> <td>Utility/Reissue issue fee (inc. advance copies)</td> <td></td> </tr> <tr> <td>1502      480</td> <td>2502      240</td> <td>Design issue fee (inc. advance copies)</td> <td></td> </tr> <tr> <td>1460      130</td> <td>1460      130</td> <td>Petitions to the Commissioner</td> <td></td> </tr> <tr> <td>1807      50</td> <td>1807      50</td> <td>Petitions related to provisional applications</td> <td></td> </tr> <tr> <td>1806      180</td> <td>1806      180</td> <td>Submission of Information Disclosure Statement</td> <td></td> </tr> <tr> <td>8021      40</td> <td>8021      40</td> <td>Recording each patent assignment per property (times number of properties)</td> <td></td> </tr> <tr> <td colspan="4">Other Fee (specify) _____</td> </tr> </tbody> </table> |   |                |            | Large Entity   | Small Entity | Fee Description | Fee Paid    | Code    (\$)    | Code    (\$) |             |  | 1051      130 | 2051      65 | Surcharge - Late filing fee or oath        |             | 1052      50 | 2052      25                                | Surcharge - Late provisional Filing Fee or cover sheet |            | 1053      130                                   | 1053      130              | Non-English specification |   | 1812    2,520 | 1812    2,520 | For Filing a Request for Reexamination. (ex parte) |  | 1251      110 | 2251      55 | Extension for reply within first month |  | 1252      420 | 2252      210 | Extension for reply within second month |  | 1253      950 | 2253      475 | Extension for reply within third month |  | 1254    1,480 | 2254      740 | Extension for reply within fourth month |  | 1255    2,010 | 2255    1,005 | Extension for reply within fifth month |  | 1402      330 | 2402      165 | Filing a brief in support of an appeal |  | 1403      290 | 2403      145 | Request for oral hearing |  | 1814      110 | 2814      55 | Terminal Disclaimer Fee |  | 1452      110 | 2452      55 | Petition to Revive - unavoidable |  | 1453    1,330 | 2453      665 | Petition to Revive - unintentional |  | 1501    1,330 | 2501      665 | Utility/Reissue issue fee (inc. advance copies) |  | 1502      480 | 2502      240 | Design issue fee (inc. advance copies) |  | 1460      130 | 1460      130 | Petitions to the Commissioner |  | 1807      50 | 1807      50 | Petitions related to provisional applications |  | 1806      180 | 1806      180 | Submission of Information Disclosure Statement |  | 8021      40 | 8021      40 | Recording each patent assignment per property (times number of properties) |  | Other Fee (specify) _____ |  |  |  |
| Large Entity   | Small Entity             | Fee Description  | Fee Paid                                    |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Code    (\$)   | Code    (\$)             |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1051      130  | 2051      65             | Surcharge - Late filing fee or oath  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1052      50   | 2052      25             | Surcharge - Late provisional Filing Fee or cover sheet   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1053      130  | 1053      130            | Non-English specification  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1812    2,520  | 1812    2,520            | For Filing a Request for Reexamination. (ex parte)   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1251      110  | 2251      55             | Extension for reply within first month   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1252      420  | 2252      210            | Extension for reply within second month  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1253      950  | 2253      475            | Extension for reply within third month   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1254    1,480  | 2254      740            | Extension for reply within fourth month  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1255    2,010  | 2255    1,005            | Extension for reply within fifth month   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1402      330  | 2402      165            | Filing a brief in support of an appeal   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1403      290  | 2403      145            | Request for oral hearing   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1814      110  | 2814      55             | Terminal Disclaimer Fee  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1452      110  | 2452      55             | Petition to Revive - unavoidable   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1453    1,330  | 2453      665            | Petition to Revive - unintentional   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1501    1,330  | 2501      665            | Utility/Reissue issue fee (inc. advance copies)  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1502      480  | 2502      240            | Design issue fee (inc. advance copies)   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1460      130  | 1460      130            | Petitions to the Commissioner  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1807      50   | 1807      50             | Petitions related to provisional applications  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1806      180  | 1806      180            | Submission of Information Disclosure Statement   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 8021      40   | 8021      40             | Recording each patent assignment per property (times number of properties)   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Other Fee (specify) _____  |                          |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <b>FEE CALCULATION</b>   |                          |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <b>1. BASIC FILING FEE</b>   |                          |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Large Entity</th> <th style="text-align: left;">Small Entity</th> <th></th> </tr> <tr> <th>Fee    Fee</th> <th>Fee    Fee</th> <th></th> </tr> <tr> <th>Code   (\$)</th> <th>Code   (\$)</th> <th>Fee Description</th> </tr> </thead> <tbody> <tr> <td>1001    770</td> <td>2001    385</td> <td><input checked="" type="checkbox"/> Utility Filing Fee</td> </tr> <tr> <td>1002    340</td> <td>2002    170</td> <td><input type="checkbox"/> Design Filing Fee</td> </tr> <tr> <td>1004    770</td> <td>2004    385</td> <td><input type="checkbox"/> Reissue Filing Fee</td> </tr> <tr> <td>1005    160</td> <td>2005    80</td> <td><input type="checkbox"/> Prov. Filing Fee</td> </tr> <tr> <td colspan="3" style="text-align: right;"><b>Subtotal (1) \$ 385</b></td> </tr> </tbody> </table>   |                          | Large Entity   | Small Entity                                |                | Fee    Fee | Fee    Fee     |              | Code   (\$)     | Code   (\$) | Fee Description | 1001    770  | 2001    385 | <input checked="" type="checkbox"/> Utility Filing Fee | 1002    340   | 2002    170  | <input type="checkbox"/> Design Filing Fee | 1004    770 | 2004    385  | <input type="checkbox"/> Reissue Filing Fee | 1005    160  | 2005    80 | <input type="checkbox"/> Prov. Filing Fee       | <b>Subtotal (1) \$ 385</b> |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Large Entity   | Small Entity             |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Fee    Fee   | Fee    Fee               |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Code   (\$)  | Code   (\$)              | Fee Description  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1001    770  | 2001    385              | <input checked="" type="checkbox"/> Utility Filing Fee   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1002    340  | 2002    170              | <input type="checkbox"/> Design Filing Fee   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1004    770  | 2004    385              | <input type="checkbox"/> Reissue Filing Fee  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1005    160  | 2005    80               | <input type="checkbox"/> Prov. Filing Fee  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <b>Subtotal (1) \$ 385</b>   |                          |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <b>2. EXTRA CLAIM FEES</b>   |                          |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Number Claims</th> <th>Prior**</th> <th>Extra</th> <th>Fee from Below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td><b>Total</b></td> <td><b>4</b></td> <td><b>20</b></td> <td><b>0</b></td> <td><b>9</b></td> <td><b>0</b></td> </tr> <tr> <td><b>Indep.</b></td> <td><b>1</b></td> <td><b>3</b></td> <td><b>0</b></td> <td><b>43</b></td> <td><b>0</b></td> </tr> </tbody> </table>   |                          |  | Number Claims                               | Prior**        | Extra      | Fee from Below | Fee Paid     | <b>Total</b>    | <b>4</b>    | <b>20</b>       | <b>0</b>     | <b>9</b>    | <b>0</b>   | <b>Indep.</b> | <b>1</b>     | <b>3</b>                                   | <b>0</b>    | <b>43</b>    | <b>0</b>                                    |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
|  | Number Claims            | Prior**  | Extra                                       | Fee from Below | Fee Paid   |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <b>Total</b>   | <b>4</b>                 | <b>20</b>  | <b>0</b>                                    | <b>9</b>       | <b>0</b>   |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <b>Indep.</b>  | <b>1</b>                 | <b>3</b>   | <b>0</b>                                    | <b>43</b>      | <b>0</b>   |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Multiple Dependent Claims<br><br>** Insert 3 and 20, or number previously paid if greater; Reissue see below<br><br><table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Large Entity</th> <th style="text-align: left;">Small Entity</th> <th></th> </tr> <tr> <th>Fee    Fee</th> <th>Fee    Fee</th> <th>Description</th> </tr> <tr> <th>Code   (\$)</th> <th>Code   (\$)</th> <th></th> </tr> </thead> <tbody> <tr> <td>1202    18</td> <td>2202    9</td> <td>Claims in excess of 20</td> </tr> <tr> <td>1201    86</td> <td>2201    43</td> <td>Independent claims in excess of 3</td> </tr> <tr> <td>1203    290</td> <td>2203    145</td> <td>Multiple Dependent Claims</td> </tr> <tr> <td>1204    86</td> <td>2204    43</td> <td>Reissue Independent Claims over Original Patent</td> </tr> <tr> <td>1205    18</td> <td>2205    9</td> <td>Reissue claims in excess of 20 and over original patent</td> </tr> </tbody> </table> |                          | Large Entity   | Small Entity                                |                | Fee    Fee | Fee    Fee     | Description  | Code   (\$)     | Code   (\$) |                 | 1202    18   | 2202    9   | Claims in excess of 20                                 | 1201    86    | 2201    43   | Independent claims in excess of 3          | 1203    290 | 2203    145  | Multiple Dependent Claims                   | 1204    86   | 2204    43 | Reissue Independent Claims over Original Patent | 1205    18                 | 2205    9                 | Reissue claims in excess of 20 and over original patent |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Large Entity   | Small Entity             |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Fee    Fee   | Fee    Fee               | Description  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| Code   (\$)  | Code   (\$)              |  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1202    18   | 2202    9                | Claims in excess of 20   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1201    86   | 2201    43               | Independent claims in excess of 3  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1203    290  | 2203    145              | Multiple Dependent Claims  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1204    86   | 2204    43               | Reissue Independent Claims over Original Patent  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| 1205    18   | 2205    9                | Reissue claims in excess of 20 and over original patent  |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |
| <b>Subtotal (2) \$ 0</b>   |                          | <b>Subtotal (3) \$</b>   |   |                |            |                |              |                 |             |                 |              |             |  |               |              |  |             |              |   |  |            |   |                            |                           |   |               |               |  |  |               |              |  |  |               |               |   |  |               |               |  |  |               |               |   |  |               |               |  |  |               |               |  |  |               |               |                          |  |               |              |                         |  |               |              |                                  |  |               |               |                                    |  |               |               |   |  |               |               |  |  |               |               |                               |  |              |              |   |  |               |               |  |  |              |              |  |  |                           |  |  |  |

Signature   
 (Judson K Champlin)  
 Date April 19, 2004

Reg. No. 34,797

Deposit Account No. 23-1123